SWOSU Receives Grants to Purchase Classroom Equipment

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Southwestern Oklahoma State University in Weatherford has received grants for $50,000 to purchase equipment. The awards came from the Oklahoma IDeA Network of Biomedical Research Excellence (OK-INBRE) funded by the National Institutes of Health. Dr. William Kelly (right), chair of the SWOSU Department of Chemistry and Physics, is principal investigator of the award. With Kelly is SWOSU Provost Dr. Blake Sonobe.

Southwestern Oklahoma State University in Weatherford has received two additional grant awards in the amounts of $35,000 and $15,000 from the Oklahoma IDeA Network of Biomedical Research Excellence (OK-INBRE) funded by the National Institutes of Health.

SWOSU is in partnership with the University of Oklahoma Health Sciences Center.

Dr. William Kelly, chair and professor in the Department of Chemistry and Physics, is the principal investigator of the INBRE equipment grants at SWOSU. These grants, in part, will support faculty researchers at SWOSU with needed equipment.

The equipment purchased with these additional funds includes a Fluorescent Stereomicroscope, valued at $17,500. The microscope will be used in courses such as Cell Biology, Molecular Biology, Developmental Biology, Physiology and other laboratory courses as well as research in biomedical fields, including synaptic transmission, development, feeding behavior and physiology.

The stereomicroscope will be used by students and faculty in regular teaching laboratories and also in undergraduate research projects.

Another equipment item to be purchased with the grant money is a Refractive Index Detector for Shimadzu HPLC, which is a detector that has the capability to analyze components with limited or no UV absorption, such as polymers used in medical applications, sugars, polysaccharides, fatty acids and synthetic polymers.

The detector will be used in research involving molecular weight determination of macromolecules, including biopolymers, via gel permeation chromatography (GPC) and size exclusion chromatography (SEC). The Refractive Index Detector is valued at $8,500.

Other pieces of equipment to be purchased are a Beckman XL-90 Ultracentrifuge with rotor valued at $13,000 to support faculty research in synaptic transmission and mitochondrial electron transport chain inhibitors. Also, a Parallel Quantum Solutions 16-node Modeling Workstation, valued at $11,000, will be used, in part, for research involving modeling the iron-nitrogen oxide complexation mechanism in a variety of biologically important ironporphyrin proteins, computational revaluation of carbon-13 nmr structural data of several alkaloid natural products, and modeling docking of mitochondrial electron transport chain complex II inhibitors.